

REMARKS

Upon entry of this amendment, claims 6-12 are pending in this application. Of these, claims 6 and 11 are independent. Claims 1-5 are canceled. Claims 6, 11, and 12 are amended. Applicants believe that these changes introduce no new matter. Entry and consideration of this amendment are respectfully requested. A copy of the above changes showing deletions and insertions is provided in the Attachment following this Amendment.

Rejections under 35 U.S.C. § 103

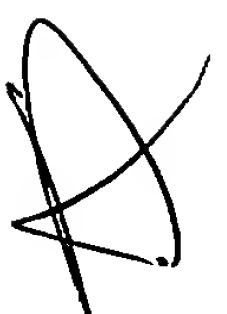
Claims 1-5 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Maxemchuk et al., "A cooperative Packet Recovery Protocol for Multicast Video." Claims 1-5 have been canceled, thereby rendering this rejection moot. However, Applicants reserve the right to pursue issuance of these claims in a continuing application.

Rejections under 35 U.S.C. § 112

Claims 6-10 are rejected under 35 U.S.C. § 112, second paragraph. As the basis of this rejection, the Examiner asserts that language on line 6 of claim 6 is has been amended. Claims 7-10 are rejected as being dependent on claim 6. Line 6 of claim 6 has been amended. Accordingly, Applicants request that this rejection be withdrawn.

Allowable Subject Matter

Claims 11 and 12 are objected to for containing various informalities, but are indicated on page 3 of the Office Action as being allowed. Claims 11 and 12 have been amended to correct these informalities. Applicants respectfully request that these objections be withdrawn.



CONCLUSION

Applicants respectfully submit that all of the stated grounds of rejection have been properly traversed accommodated or rendered moot. Thus, Applicants believe that the present application is in condition for allowance, and as such, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections, and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. 13-4503, Order No. 2455-4582. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.


In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 13-4503, Order No. 2455-4582. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

Respectfully submitted,
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Dated: January 6, 2003

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant(s): V. BHAGAVATH et al.

Serial No.: 09/353,461 Group Art Unit: 2184

Filed: July 13, 1999 Examiner: S. Baderman

For: **NETWORK-BASED SERVICE FOR RECIPIENT-INITIATED AUTOMATIC REPAIR OF IP MULTICAST SESSIONS**

ATTACHMENT

In this attachment, all additions are shown underlined (e.g., the), and deletions are shown in brackets (e.g., [the]).

IN THE CLAIMS:

Please note the following changes to claims 6, 11, and 12:

6. (Amended) A method for repairing multicast packets in a network carrying multicast packets in a multicast session from a source to a plurality of multicast recipients in that session, comprising:

receiving a request from a recipient's receiver to join a first IP multicast session;
intercepting said request and sending it to a controller in a repair server;
[forwarding the a to] determining from a subscription server [to determine if]
whether said recipient has subscribed to a repair service;

receiving a positive response at the controller from the subscription server and
determining whether a repair/encryption module exists in the repair server for the first
multicast session;

selecting at the controller a new IP multicast address and port number and a
decryption key for a second IP multicast session;

sending the new IP multicast address and port number and the decryption key to
the translator/decryption module;

creating with the controller a new repair/encryption module and providing the new repair/encryption module with the new IP multicast address and port number and the encryption key;

monitoring received ones of the packets to the recipient in the first session with the repair server;

buffering portions of the packets from the first session at a retransmit server in the network; and

detecting missing packets in said repair server and in response to said subscriber request, requesting missing packets from said retransmit server.

11. (Amended) A system for repairing multicast packets in a network including a source of multicast packets in a multicast session and a plurality of multicast recipients in that session, comprising:

a controller in a repair server for receiving and forwarding a request from a recipient to join a first IP multicast session;

a subscription server receiving the request from the controller to determine if said recipient has subscribed to a repair service;

said controller receiving a positive response from the subscription server and determining whether a repair/encryption module exists in the repair server for the first multicast session;

said controller generating a new IP multicast address and port number and a decryption key for a second IP multicast session;

said controller sending the new IP multicast address and port number and the decryption key to [the] a translator/decryption module;

a new repair/encryption module created by the controller, said controller providing thereto the new repair/encryption module with the new IP multicast address and port number and [the] an encryption key;

said repair server monitoring received ones of the packets to the recipient in the first session;

a retransmit server in the network buffering portions of the packets from the first session; and

said repair server detecting missing packets and in response to [said] a subscriber request, requesting missing packets from said retransmit server.

12. (Amended) The system of claim 11, which further comprises:

said repair server reading packets from said first IP multicast session and checking if there are any missing packets and requesting said retransmit server to obtain the missing packets;

said repair/encryption module encrypting packets and writing them to the second IP multicast session;

an IP stack in [the] a receiver processing the packets for the second IP multicast session and sending the processed packets to the translator/decryption module;

said translator/decryption module decrypting the packets and modifying [the] a destination IP address and port number from values for the second session to values for the first session and sending the packets to the recipient;

whereby the recipient may request that a multicast session be repaired without interrupting any applications that are already executing in the receiver.

